

Espirito Santo Shelf, Assessment Unit 60340101
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)				F95	F50	F5	Mean
Oil Fields	1	1.00	19	51	97	54	21	60	125	65	0	1	3	1	3	7	14	7
Gas Fields	6						0	0	0	0	0	0	0	0	NA	NA	NA	NA
Total		1.00	19	51	97	54	21	60	125	65	0	1	3	1				

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Forecast: Oil in Oil Fields

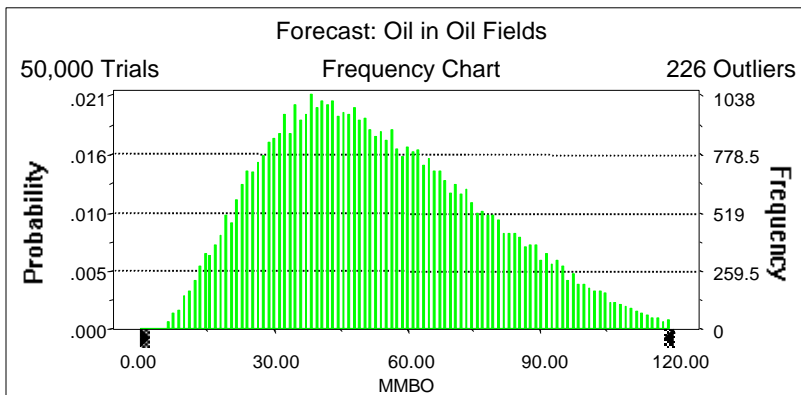
Summary:

Display range is from 0.00 to 120.00 MMBO

Entire range is from 5.41 to 160.86 MMBO

After 50,000 trials, the standard error of the mean is 0.11

Statistics:	Value
Trials	50000
Mean	53.79
Median	50.92
Mode	---
Standard Deviation	23.90
Variance	571.04
Skewness	0.47
Kurtosis	2.70
Coefficient of Variability	0.44
Range Minimum	5.41
Range Maximum	160.86
Range Width	155.45
Mean Standard Error	0.11



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	5.41
95%	19.26
90%	24.60
85%	28.68
80%	32.23
75%	35.51
70%	38.61
65%	41.59
60%	44.60
55%	47.70
50%	50.92
45%	54.29
40%	57.73
35%	61.58
30%	65.54
25%	69.89
20%	74.78
15%	80.50
10%	87.54
5%	97.14
0%	160.86

End of Forecast

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Forecast: Gas in Oil Fields

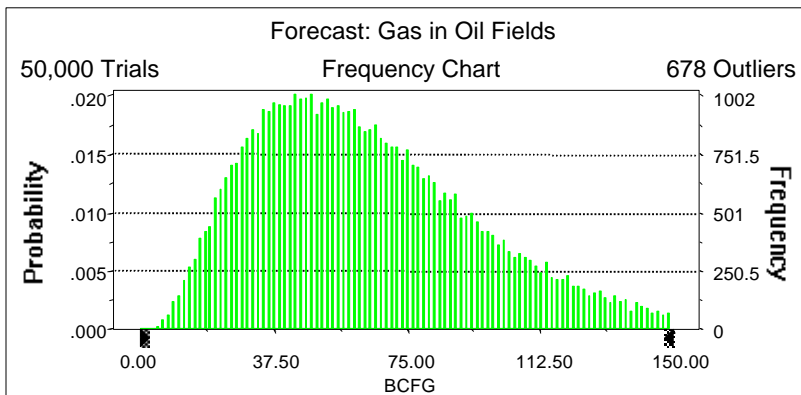
Summary:

Display range is from 0.00 to 150.00 BCFG

Entire range is from 4.48 to 263.26 BCFG

After 50,000 trials, the standard error of the mean is 0.14

Statistics:	Value
Trials	50000
Mean	64.59
Median	59.59
Mode	---
Standard Deviation	32.18
Variance	1,035.59
Skewness	0.78
Kurtosis	3.49
Coefficient of Variability	0.50
Range Minimum	4.48
Range Maximum	263.26
Range Width	258.79
Mean Standard Error	0.14



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	4.48
95%	21.24
90%	27.21
85%	32.00
80%	36.27
75%	40.18
70%	44.07
65%	47.84
60%	51.73
55%	55.62
50%	59.59
45%	63.75
40%	68.16
35%	72.92
30%	78.07
25%	83.82
20%	90.52
15%	98.61
10%	109.34
5%	125.27
0%	263.26

End of Forecast

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Forecast: NGL in Oil Fields

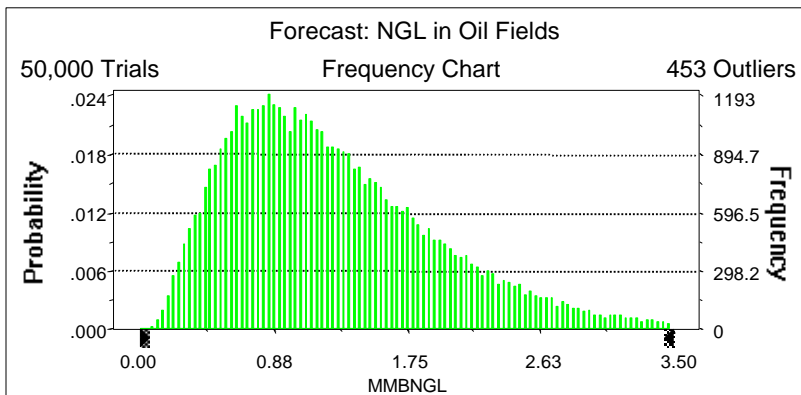
Summary:

Display range is from 0.00 to 3.50 MMBNGL

Entire range is from 0.07 to 6.10 MMBNGL

After 50,000 trials, the standard error of the mean is 0.00

Statistics:	Value
Trials	50000
Mean	1.29
Median	1.16
Mode	---
Standard Deviation	0.71
Variance	0.50
Skewness	1.04
Kurtosis	4.40
Coefficient of Variability	0.55
Range Minimum	0.07
Range Maximum	6.10
Range Width	6.02
Mean Standard Error	0.00



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.07
95%	0.39
90%	0.51
85%	0.60
80%	0.68
75%	0.76
70%	0.84
65%	0.92
60%	1.00
55%	1.08
50%	1.16
45%	1.25
40%	1.34
35%	1.44
30%	1.56
25%	1.69
20%	1.83
15%	2.01
10%	2.26
5%	2.64
0%	6.10

End of Forecast

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Forecast: Largest Oil Field

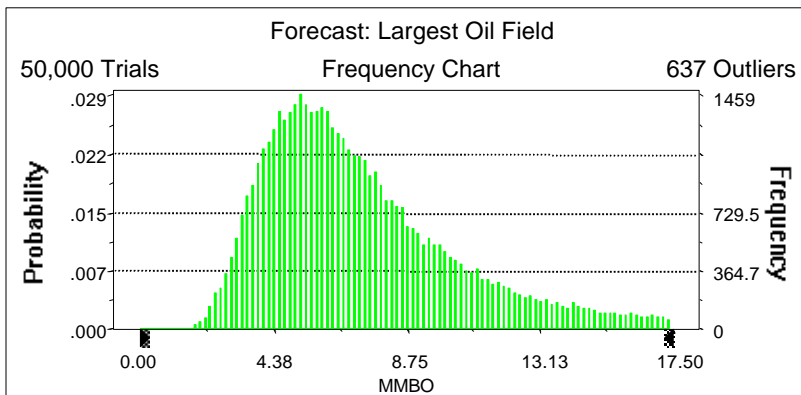
Summary:

Display range is from 0.00 to 17.50 MMBO

Entire range is from 1.45 to 20.00 MMBO

After 50,000 trials, the standard error of the mean is 0.01

Statistics:	Value
Trials	50000
Mean	7.37
Median	6.60
Mode	---
Standard Deviation	3.31
Variance	10.94
Skewness	1.17
Kurtosis	4.29
Coefficient of Variability	0.45
Range Minimum	1.45
Range Maximum	20.00
Range Width	18.55
Mean Standard Error	0.01



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	1.45
95%	3.41
90%	3.93
85%	4.32
80%	4.66
75%	4.99
70%	5.31
65%	5.61
60%	5.93
55%	6.25
50%	6.60
45%	6.98
40%	7.39
35%	7.83
30%	8.35
25%	8.95
20%	9.71
15%	10.65
10%	11.99
5%	14.27
0%	20.00

End of Forecast

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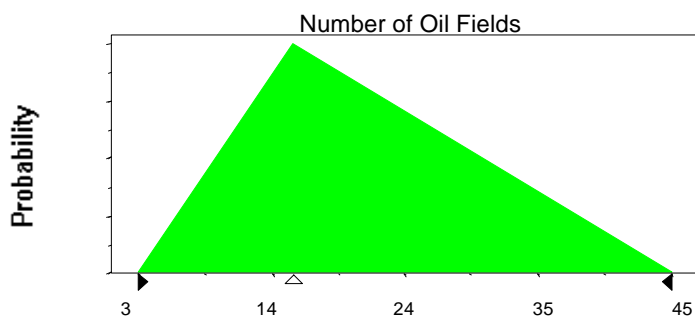
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	3
Likeliest	15
Maximum	45

Selected range is from 3 to 45
Mean value in simulation was 21



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	1.57
Standard Deviation	1.92

Shifted parameters

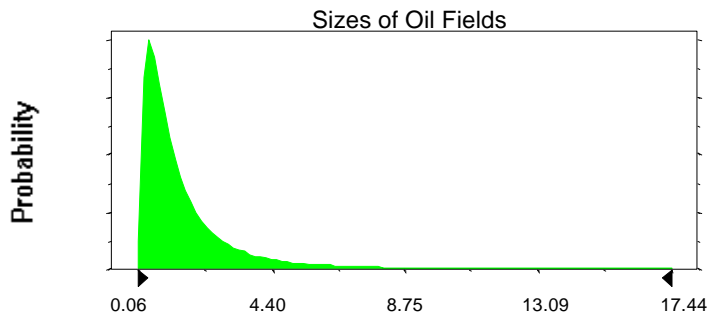
2.57
1.92

Selected range is from 0.00 to 19.00
Mean value in simulation was 1.55

1.00 to 20.00
2.55

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Assumption: Sizes of Oil Fields (cont'd)



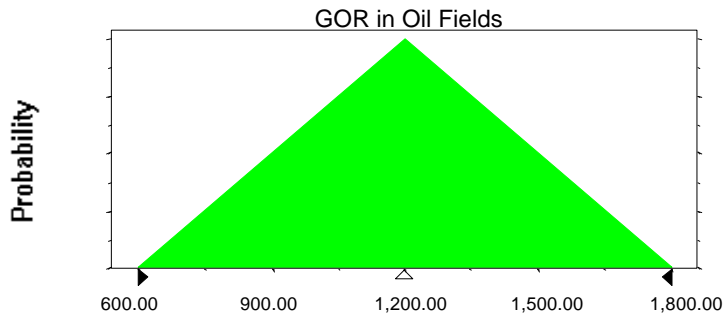
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	600.00
Likeliest	1,200.00
Maximum	1,800.00

Selected range is from 600.00 to 1,800.00

Mean value in simulation was 1,199.85



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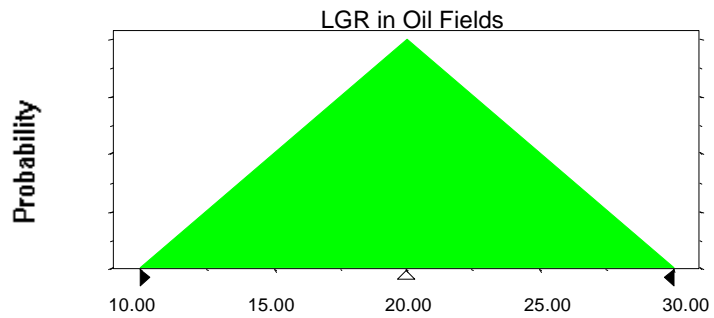
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	20.00
Maximum	30.00

Selected range is from 10.00 to 30.00

Mean value in simulation was 19.98



End of Assumptions

Simulation started on 11/17/99 at 15:52:27

Simulation stopped on 11/17/99 at 16:09:59